

Attachment Dimensions and Love in the Development of Close Relationships

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Abstract

This longitudinal study examined the role of Hazan and Shaver's (1987) attachment theory of romantic love in the development of close relationships of fifty-one couples in steady or serious dating relationships. The relations of attachment dimensions (*Avoidant*, *Anxious/ambivalent*, and *Secure*) to distal and proximal variables was explored. Results showed that more *Avoidant* and more *Anxious/ambivalent* subjects had more negative perceived attachment histories, and were more depressed; while more *Avoidant* subjects had a lower level of relationship satisfaction. More *Anxious/ambivalent* subjects also produced more negative descriptions of their relationships. The relationship was examined four months later, when relationship satisfaction and the attachment dimensions were again measured. Relationship satisfaction was the most powerful predictor of relationship dissolution, while the attachment dimensions were not related to relationship dissolution. Against predictions (at Time One), attachment dimensions were not associated with any change in the level of relationship satisfaction, but relationship satisfaction (Time One) was associated with a change in the *Avoidant* and *Secure* attachment dimensions. Finally, more *Avoidant* and more *Secure* subjects who were higher in relationship satisfaction perceived their partners to be similar to themselves in attachment dimensions, although there was no "actual" similarity between the couples (regardless of relationship satisfaction). General implications are drawn, and Hazan and Shaver's attachment theory of romantic love is re-appraised both theoretically and methodologically. Suggestions are proffered for future research.

Introduction

Love has been credited with being the moving force that makes the world go round, as it is an emotion that touches nearly every individual at some stage of their development: be it love of parent, peer, or lover. An enduring bond of love creates strong and diverse feelings which change lives, natures, and personalities. Satisfying bonds of love bring contentment and joy, while their loss or absence can engender negative emotions, such as anxiety, fear, frustration, and depression. Within social psychology, the presence or absence of love in a relationship is typically thought of as a component of relationship satisfaction.

The psychological literature concerning romantic love has dramatically increased in the last two decades, but has consisted mainly of descriptive studies. One intriguing theory, which is sociobiological, is Hazan and Shaver's (1987) attachment theory of romantic love. Their theory is derived from Bowlby's (1969) attachment theory and the subsequent infancy research of Ainsworth, Blehar, Waters, and Wall (1978), and seeks to understand love in the context of development of the individual.

The purpose of the present study was to investigate Hazan and Shaver's (1987) attachment theory of romantic love, with its three attachment dimensions, *Avoidant*, *Anxious/ambivalent*, and *Secure*. It was proposed to examine attachment dimensions in relation to the perception of childhood attachment history, the levels of both relationship satisfaction and depression, lovestyles, free-response descriptions of relationships, and the perceptions of relationships across couples. In addition, the role of the attachment dimensions was examined longitudinally over a four month period.

The introduction will be presented in three sections, viz: The first section will contain an outline of Hazan and Shaver's theory, and associated research. The second

section will introduce the different components of the present study. The final section will summarize the present study, and present the hypotheses.

Hazan and Shaver's Theory of Romantic Love

Outline of Theory

First, this section describes the background to Hazan and Shaver's (1987) attachment theory of romantic love, under the headings of Bowlby's (1969) attachment theory, the infancy literature of Ainsworth (1973), and child attachment continuity; and, second, presents Hazan and Shaver's theory.

Bowlby's attachment theory

According to Bowlby (1969, 1973) the infant-caregiver bond initiates mental models which are carried through to adult relationships, with possibilities for later modification and change. He posited that these mental models were prototypes which include expectations, beliefs, and defences about relatedness. This attachment theory was based on observations of the behaviour of infants and young children who were separated from their primary caregiver (usually the mother) for varying lengths of time. The infant went through a predictable series of emotional reactions at this separation. The first reaction was *Protest*, which involved crying, active searching, and resistance to others' soothing efforts. Then followed *Despair*, which was a state of passivity and obvious sadness. Finally, *Detachment*, which was an active, seemingly defensive disregard for, and avoidance of, the mother if she returned. Bowlby posited that the attachment system appeared to have evolved to protect infants from danger by keeping them close to the mother, as the first two reactions also applied to other primate infants. Bowlby stated that although the attachment system was one of a number of behavioural systems (including caregiving, and mating/reproduction), it was of critical importance in facilitating the functioning of the other systems. Personal continuity, through to adulthood, is principally due to the persistence of mental models which are central components of personality.

Ainsworth's infancy literature

A mother's treatment of her infant in the first twelve months is important in determining the child's attachment relationship, according to research by Ainsworth, Blehar, Waters, and Wall (1978; see also Ainsworth, 1973). Mothers who are sensitive and responsive to their infants' signals and needs nurture more *Secure* children, who explore their surroundings. Mothers who are inconsistent or slow in responding to their infants' cries, or who regularly interfere with or intrude on their infants' desires and activities, produce more *Anxious/ambivalent* infants who cry more than usual. These infants explore less than usual, and often alternate clinging behaviours with obvious expressions of anger. The mother who consistently rejects or rebuffs her infant's attempts to gain physical contact may rear an infant who has learnt to *Avoid* her. A common feature of mothers who rejected their children was a deep aversion to close bodily contact, and less mobility of emotional expression (Ainsworth, 1982). Ainsworth et al named the three types of attachment *Secure*, *Anxious/ambivalent*, and *Avoidant*, with the latter two being Insecure attachment dimensions. Infants who are more *Anxious/ambivalent* in their attachment dimension frequently display the behaviours Bowlby (1969) called *Protest*, while more *Avoidant* infants generally reveal the behaviours he called *Detachment*.

The infants' expectations of their mothers' accessibility and responsiveness is central to the three attachment dimensions (Ainsworth, 1973), and this is consistent with Bowlby's (1969) theory. The central components of infants' and children's personalities are the mental models they construct of themselves and their major social-interaction partners, and these models influence behaviour patterns. A sense of security, contentment and joy is a result of satisfying bonds, or a *Secure* attachment dimension. The absence of such bonds, or doubts about their stability, result in negative emotions, e.g. anxiety, anger, or depression, and can eventuate in Insecure relationships with people being either more *Avoidant* or more *Anxious/ambivalent* (both Insecure

attachment dimensions). Like Bowlby, Ainsworth also assumed there were separate behavioural systems, including attachment, caregiving, and mating/reproduction.

Child attachment continuity

Bowlby (1980) posits that affectional bonds are formed first between child and parent, and then later between adult and adult, during the course of healthy development. The similarity between the type of attachment behaviour Bowlby (1969) studied in young children and in the type of attachment behaviour that can be observed in adult lovers was noted by Weiss (1973). In a later report, Weiss (1986) stated that a sense of well-being in the presence of the loved one, as well as separation distress when the same individual becomes inaccessible, has been noted in both in the infant-caregiver attachment and in adult pair relationships. Ainsworth (1985) reviews research concerning attachment dimensions and sexual pair-bonding of young adults adjusting to college life, where an attachment relationship tends to be established. Ainsworth reports that the attachment bonding of the father to the child has been researched in the last decade. In a review of infant-mother attachment, Thompson and Lamb (1986) note that some research findings support the stability of attachment longitudinally and also the predictive qualities of attachment dimensions as well as cross-situational continuity.

Hazan and Shaver's attachment theory of romantic love

Hazan and Shaver's (1987) attachment theory of romantic love is derived from Bowlby's (1969, 1973) attachment theory, and the subsequent infancy research of Ainsworth, et al. (1978). Hazan and Shaver's first article has been followed by more literature on their theory (Shaver & Hazan, 1987; Shaver & Hazan, 1988; Shaver, Hazan & Bradshaw, 1988). As Shaver and Hazan (1987) explained:

"As used in ordinary conversation, the word love seems to have at least two meanings. It can be used to designate a discrete and fairly short-lived emotional state (e. g. a surge of passion, a surge of affection) and can also be used to describe a continuing disposition to experience that state in relation to a particular person." (p. 475).

It is in this latter state that Hazan and Shaver propose that Bowlby's (1969, 1973) mental models influence desires for, and evaluations of, adult relationships. According to

Hazan and Shaver, the affective bonding which fosters the attachment between infants and their caregivers has parallels with romantic love that explain the variations in the course of relationship progression as well as in the degree of satisfaction obtained from a relationship. Shaver and Hazan (1988) assert that feelings such as affection, security, fear, anger, and sadness are involved in an attachment relationship as well as the behaviours and behavioural tendencies associated with those feelings. They state that attachment as a behavioural system is an ethological term, and that Bowlby's (1969) theory is compatible with the evolutionary biological discipline which postulates an innate desire for secure attachment. Both Bowlby and Ainsworth (1973) posited separate behavioural systems, including attachment, caregiving, and mating/reproductive systems. Shaver et al. (1988) assert that adult romantic love involves the integration of these three systems, with attachment history influencing the "form of integration".

There are two important ethological differences between simple attachment and adult love: in adult love sexual attraction and sexual behaviour are almost always involved (Berscheid, 1988; Tennov, 1979), and typically adult love involves the reciprocal caregiving between two partners of approximate equal power and status who serve as attachment figures for each other (Shaver & Hazan, 1988). Hazan and Shaver consider that romantic love and infant caregiver attachment both provide for reproduction and survival:

"Romantic love is a biological process designed by evolution to facilitate attachment between adult sexual partners who, at the time love evolved, were likely to become parents of an infant who would need their reliable care." (1987, p. 523).

They assert that romantic love has always existed as a biological potential, and quote explicit records of romantic love in all the great literate civilizations of early historic times, including Egypt, China, Greece, and Rome (see Mellen, 1981). Hazan and Shaver note the similarity between *Secure* children who begin to take parental support for granted in early childhood, and lovers who move from the fascination and preoccupation of the

romantic (attaching) phase of love to what could be a decades-long period of *Secure* attachment.

Shaver and Hazan (1987) assert that continuity of attachment across life course is probably maintained in a number of interrelated ways, but Bowlby's "inner working models" emphasize cognitive continuity. Although the caregiving and sexual systems are dormant in infancy and early childhood, mental models constructed then are likely to be invoked during adolescence and early adulthood (Shaver et al., 1988). Although Hazan and Shaver (1987) do not claim as Freud would that the original mental models remain unaltered or in mental isolation, nevertheless they assert that the attachment dimensions formed in infancy would influence a person mainly in early adulthood, and perhaps throughout the lifespan. To them, any social development of mental models would take place over time.

Shaver and Hazan (1988) have summed up the advantages of the attachment-theoretical approach to romantic love: (1) its concern for the functions, emotional dynamics, evolutionary origins, and developmental pathways of love; (2) in its links between human and primate forms of affectional bonding it brings love within a biological rather than cultural context; (3) it accommodates love and the emotionally positive aspects of affectional bonding, as well as separation, loss, anxiety, loneliness, and grief which sometimes lead to suicide and violence; and (4) by offering a lifespan perspective on affectional bonding, it suggests a unified conception of love which ranges from love of parents, peers, teachers, rock stars, lovers, and spouse, to love of God, thus giving an extensive slant on the universal human need for affectional bonding.

Research on Hazan and Shaver's Theory

To test their theory, Hazan and Shaver (1987) conducted two studies: one was a newspaper survey of 620 subjects, and the other comprised 108 undergraduate students. Hazan and Shaver composed a statement for each of the attachment dimensions (see Method section) describing feelings they ascribed to those dimensions, drawing from Bowlby's (1969) and Ainsworth et al's (1978) literature. Subjects were asked how they

typically felt in relationships, and to choose one of the three statements about attachment dimensions. This "forced-choice" technique created orthogonal attachment dimensions, which precluded any correlational statistics. Hazan and Shaver compiled a list of adjectives drawn from Ainsworth et al's literature on parents' attitudes. To measure perceived attachment history, subjects were asked to choose the pertinent adjectives describing their parents' perceived attitudes towards them during childhood. Subjects were also questioned about any separation from either parent, and whether the parents ever separated or divorced, but attachment dimensions were not related to these factors. Hazan and Shaver also had a questionnaire on the subject's most important past or present romantic relationship. Findings revealed that adults differed predictably in the way they experienced romantic relationships, and in their perceived relationship with their parents, according to the attachment dimension in which they were located.

Adults who were *Secure* in their attachment dimension had longer-lasting relationships characterized by happiness, trust, friendship, and acceptance of their partner; an *Anxious/ambivalent* adult experienced love as an obsessional, almost painfully exciting struggle to merge with another person, involving emotional highs and lows with extreme sexual attraction and jealousy; and an *Avoidant* adult found that love was marked by a fear of intimacy, emotional highs and lows, and jealousy. Their perceived attachment histories revealed that respondents described their caregivers in different ways. Subjects who were *Secure* reported warmer relationships with their caregivers, the *Anxious/ambivalent* adults described their fathers as unfair, and the *Avoidant* adults described their mothers as cold and rejecting. Hazan and Shaver noted the similarity in each of the attachment dimensions between the perceived attitudes of parents reported by their subjects, and the attitudes of parents observed in Ainsworth et al's (1978) studies.

There was also a similarity between the reported behaviours (apart from sexual attraction) experienced in the attachment dimensions by Hazan and Shaver's (1987) adult subjects and the behaviours observed in the attachment dimensions of children in Ainsworth et al's (1978) studies. Accordingly, Hazan and Shaver posited that cognitive-

emotional structures or mental models controlled the similarities and continuities of people's orientation in close relationships across the life span.

Hazan and Shaver's (1987) attachment dimensions of romantic love have been investigated by Levy and Davis (1988) in two studies using single subjects and dating couples. Unlike Hazan and Shaver's studies, five-point Likert rating scales were used to measure the attachment dimensions, which avoids assuming that the attachment dimensions are necessarily independent. Subjects who were more *Secure* in their attachment dimension were in fact less *Avoidant*, but there were no other significant correlations among the attachment dimensions.

A study on the attachment dimensions of romantic love using single subjects was conducted by Hendrick and Hendrick (1989). This study also used a five-point Likert rating scale for the three attachment dimensions. Results again revealed that the more *Secure* subjects were less *Avoidant*, but also less *Anxious/ambivalent* in their attachment dimension. These results show that the attachment dimensions are not necessarily orthogonal, as assumed by Hazan and Shaver (1987). Hendrick and Hendrick compared the attachment dimensions to "building blocks of interpersonal relationships" which life experiences and personalities can change.

Attachment Dimensions and Love in the Development of Close Relationships

The present research investigated the attachment dimensions of 51 couples, and explored the relationship of these dimensions to other variables. These variables will be introduced under the following headings: attachment history, relationship satisfaction, depression, free-response description of relationship, predictors of relationship dissolution, and perceptions of relationship across couples, and relations between attachment dimensions and lovestyles.

Attachment History

As already mentioned, Hazan and Shaver (1987) used a forced-choice question to establish attachment dimensions so that correlations could not be used on their data. A discriminant function analysis to separate the three attachment dimensions was performed on the adjectives chosen by the subjects to describe their perceived attachment history (Hazan & Shaver, 1987). No attachment history was obtained in the investigations of Hazan and Shaver's attachment theory of romantic love by Levy and Davis (1988) or Hendrick and Hendrick (1989).

The present study investigated the subjects' attachment dimensions and also explored their perceived attachment history. The hypotheses from this section were: (a) more *Secure* subjects would be less *Avoidant* and less *Anxious/ambivalent*; (b) more *Avoidant* and more *Anxious/ambivalent* subjects would have negative memories of their parents; and (c) more *Secure* subjects would have positive memories of their parents.

Relationship Satisfaction

In investigating their subjects' most important past or present relationship, Hazan and Shaver (1987) found that *Secure* subjects were happier, while the *Anxious/ambivalent* or *Avoidant* subjects experienced emotional highs and lows. The relationship between attachment dimensions of romantic love and relationship satisfaction was explored by Levy and Davis (1988) with single subjects and with couples, and Hendrick and Hendrick (1989) with single subjects. Common findings were that subjects who were more *Secure* in their attachment dimension were higher in relationship satisfaction, while the more *Avoidant* and more *Anxious/ambivalent* were lower in relationship satisfaction.

Relationship satisfaction is a powerful entity, which has been found to be a discriminating factor in relationship dissolution (Fincham & Bradbury, 1987; Fletcher, Fincham, Cramer, & Heron, 1987; Hendrick, Hendrick, & Adler, 1988). It is plausible, therefore, that relationship satisfaction could have an influence on attachment dimensions during the course of a close relationship. However, Bowlby (1969, 1973) posited that mental models of attachment were carried into adult relationships with

possibilities for later modification and change. Both Bowlby's attachment theory and Hazan and Shaver's (1987) attachment theory of romantic love would predict that the attachment dimensions would influence relationship satisfaction in the short term, rather than the other way round. Given this argument, it is more probable that attachment dimensions would remain steady during four months of close relationship research, and possibly influence the level of relationship satisfaction.

The present study had a four months followup where attachment dimensions and levels of relationship satisfaction were again assessed. The hypotheses were: (a) that subjects who were more *Avoidant* and more *Anxious/ambivalent* would have lower levels of relationship satisfaction, while the more *Secure* subjects would have higher levels of relationship satisfaction; and (b) that the attachment dimensions would have some modifying influence on the level of relationship satisfaction at the four months followup.

Depression

Relationship satisfaction and depression have been found to be negatively correlated by Fletcher and Blampied (1989), and in many other studies (for review see Gotlib & Hooley, 1988). This, together with the previously reported positive association between the attachment dimensions and relationship satisfaction, could be a sufficient reason to explore an association between the three attachment dimensions and depression.

Moreover, Bowlby (1973) noted that the states of anxiety and depression which occur during adult years could be linked in a systematic way to the states of *Anxiety*, *Despair*, and *Detachment* suffered in childhood. Depressive symptoms in children have been found to be associated with both *Anxious/ambivalent* and *Avoidant* attachment dimensions (Sroufe, 1988). Mothers with major depression had more children who were *Avoidant* and *Anxious/ambivalent* in their attachment dimensions than normal mothers (Radke-Yarrow, Cummings, Kuczynski, and Chapman, 1985). Poor parental attachment, associated with an increased number of hospitalizations of psychiatric patients, points to strong links between attachment and depression (Joyce, 1984).

Depression, together with jealousy and *Anxious* romantic love, was linked to attachment in Hindy and Schwarz's (1985) "Lovesickness". Their description of *Anxious* romantic love is typical of the *Anxious/ambivalent* attachment dimension of romantic love described by Hazan and Shaver (1987). The *Anxious/ambivalent* attachment dimension also compares with Tennov's (1979) Limerence which has been linked with depression. The *Anxious/ambivalent* attachment dimension may also be compared to Peele's (with Brodsky, 1975) addictive love, which engenders dependency whilst diminishing enjoyment - this surely is a setting for depression.

The hypotheses were: (a) that subjects who were more *Avoidant* and more *Anxious/ambivalent* would be more depressed; (b) that subjects who were more *Secure* would be less depressed; and (c) that there would be an inverse relationship between depression and relationship satisfaction.

Free-Response Description of Relationship

Attributions have been credited with an important role in relationship satisfaction among couples (Newman, 1981). It has been found that higher levels of relationship satisfaction are linked to an increase in the percentage of positive units in subjects' free-response descriptions of their relationships as well as an increase in the percentage of interpersonal units involving both people in the dyad (Fincham & Bradbury, 1987; Fletcher, et al., 1987). From these findings it could be predicted that the more *Secure* subjects should write more positive and more interpersonal descriptions of their relationships.

Hazan and Shaver (1987) described the more *Anxious/ambivalent* subjects as having an obsessional desire for reciprocation and union with their partners. This would make the present relationship crucial to them, perhaps invoking a negative descriptive of the relationship, especially if they were more depressed at the time of the study. From Hazan and Shaver's description of the more *Avoidant* subjects, their commitment to the present relationship could be more shallow and not of consequence to them, thus a more negative and less interpersonal relationship description could be expected.

The present study explored the association between attachment dimensions, relationship satisfaction, depression, and the percentage of positive units and percentage of interpersonal units in the free-response relationship description. The hypotheses were that: (a) subjects more *Secure* in their attachment dimension would write more positive and more interpersonal relationship descriptions; (b) subjects more *Avoidant* and/or more *Anxious/ambivalent* would write more negative and less interpersonal relationship descriptions; (c) there would be an association between a more positive and more interpersonal relationship description, and a higher level of relationship satisfaction; and (d) there would be an association between a less positive and less interpersonal relationship description, and a higher level of depression.

Predictors of Relationship Dissolution

The most powerful predictor of relationship dissolution appears to be a lower level of relationship satisfaction (Fletcher, et al., 1987; Hendrick, et al., 1988). Other predictors are depression (Gotlib & Hooley, 1988); negative relationship description (Newman, 1981; Fletcher, et al. 1987; Byrne & Murnen, 1988); less interpersonal relationship descriptions (Fletcher et al., 1987); and less Erotic, less Agapic, and more Ludic lovestyles (Hendrick et al., 1988). For attachment dimensions to have future consequences they would need to be predictive of the future, and this is the continuity that Hazan and Shaver have posited. The Erotic and Agapic lovestyles had already been compared to the more *Secure* attachment dimension and the Ludic lovestyle to the more *Avoidant* attachment dimension by Hendrick and Hendrick (1989). Accordingly, it was thought probable that subjects in the present study who were more *Avoidant* and less *Secure* in their attachment dimensions would be more likely to end their relationship.

The hypotheses were that subjects whose relationships dissolved would (a) be lower in relationship satisfaction, and more depressed; (b) produce a more negative and less interpersonal description of their relationship; (c) be less Erotic, less Agape, and more Ludic in their lovestyle; and (d) be more *Avoidant* and less *Secure* in their attachment dimension.

Perceptions of Relationship Across Couples

Jones (1986) posited that relationships are:

"... to an important degree psychological constructions - active, subtle, and subjective projections of our own needs, expectations, experiences, beliefs, and personalities which ... may prevent the participants from becoming aware of what the relationship is like when viewed from other perspectives, including that of one's relational partner." (p. 4).

Although not all studies have found the same results, researchers agree that relationship satisfaction was a factor in the similarity of subjects' own feelings to their perceptions of their partners' feelings (Sillars, 1985; Sternberg and Barnes, 1985).

In the present study it was predicted that perceived similarity (rather than actual similarity) between couples would be related to a higher level of relationship satisfaction. A measurement was made between each couple's attachment dimension self-reports (for actual similarity), as well as each person's self-report and their perception of their partner's attachment dimension (for perceived similarity).

The hypotheses were that: (a) subjects who perceived their partners to be similar to themselves on the attachment dimensions would have a higher level of relationship satisfaction; and (b) perceived similarity between partners would be much higher than actual similarity.

Relations Between Attachment Dimensions and Lovestyles

Lee (1973) proposed a colour wheel of love consisting of three primary lovestyles: Eros (passionate, romantic), Ludus (game-playing), and Storge (companionate, friendship-based); and three secondary lovestyles: Mania (possessive, dependent), Pragma (logical, practical), and Agape (altruistic, selfless). Hendrick and Hendrick (1986) extended Lee's lovestyles, when developing a reliable Love Attitudes Scale which analysed six characteristic orientations toward intimate relationships. Although these lovestyles have no related theory about the dynamic properties of the different styles of love, they are of descriptive value in documenting attitudinal, personality, and gender-related correlates of the various styles of love (Clark & Reis, 1988). Relationship

satisfaction has been correlated with four of these measures (Eros, Agape, Ludus, and Mania) fairly consistently in a number of studies (Davis & Latty-Mann, 1987; Hendrick & Hendrick, 1987; Hendrick, et al., 1988).

Levy and Davis (1988) compared Hazan and Shaver's (1987) three attachment dimensions with Lee's (1973) six lovestyles and relationship satisfaction in two studies of single subjects and dating couples. Subjects who were more *Secure* in their attachment dimension were more Erotic and more Agapic in their lovestyle, and had a higher level of relationship satisfaction. The more *Anxious/ambivalent* subjects were more Manic in their lovestyle, and had a lower level of relationship satisfaction. Subjects who were more *Avoidant* in their attachment dimension were more Ludic in their lovestyle, and also had a lower level of relationship satisfaction. Levy and Davis posited that neither approach is complete as they do not subsume each other, but suggested a more acceptable explanation of beliefs and behaviours in close relationships may yet emerge from factors extracted from the two measurements of love.

Hendrick and Hendrick (1989) also compared the three attachment dimensions of romantic love with the six lovestyles and relationship satisfaction in a study with single subjects. Hendrick and Hendrick's results were almost identical to those of Levy and Davis (1988), although their Manic lovestyle had a higher level of relationship satisfaction. This is surprising, as Manic lovers are possessive and dependent, and are also equated with the more *Anxious/ambivalent* attachment dimension.

A comparison was made between Hazan and Shaver's (1987) attachment dimensions and Lee's (1973) six lovestyles, although they differ conceptually and theoretically. Lovestyles were included as they were discriminant factors in relationship dissolution (Hendrick et al., 1988), whereas no studies have examined attachment dimensions as discriminating factors in relationship dissolution. No studies appear to have been conducted on lovestyles with regard to depression. Lee (1977) stated that the typical Ludic lover considered "his" (sic) present life satisfactory, but was rarely enthusiastic about it. This game-playing lovestyle could be a seedbed for depression.

The present study re-examined the association between the three attachment dimensions, the six lovestyles, and the levels of relationship satisfaction, and expected to duplicate the findings of Levy and Davis (1989). It was predicted that the six lovestyles would have an association with depression, in the opposite direction to those obtained between the lovestyles and relationship satisfaction. Hypotheses were: (a) subjects who were more *Secure* would be more *Erotic* and more *Agapic*, the more *Anxious/ambivalent* subjects would be more *Manic*, and the more *Avoidant* subjects would be more *Ludic*; (b) subjects who were more *Erotic* and *Agapic* would have a higher level of relationship satisfaction, and a lower level of depression, and subjects who were more *Manic* and more *Ludic* would have a lower level of relationship satisfaction, and a higher level of depression.

Summary

Hazan and Shaver's (1987) attachment dimensions of romantic love were explored in relation to perceived attachment history, levels of both relationship satisfaction and depression, lovestyles, free-response description of relationships, and perceptions of the relationship across couples. The relationship was examined four months later to examine the predictors of relationship dissolution, and to assess the effect of the attachment dimensions on the levels of relationship satisfaction, or vice versa.

This study goes beyond previous research on Hazan and Shaver's (1987) attachment theory of romantic love in three main ways: (a) studying variables longitudinally; (b) studying relevance of depression to attachment dimensions and to lovestyles; (c) studying the effect of attachment dimensions on the free-response descriptions of the relationships; and (d) studying the perception of relationship across couples in relation to levels of relationship satisfaction.

Hypotheses

To summarise the main hypotheses, they are:

- (1) More *Avoidant* and more *Anxious/ambivalent* subjects would have negative memories of their parents, while more *Secure* subjects would have positive memories of their parents.
- (2) More *Avoidant* and more *Anxious/ambivalent* subjects would have lower levels of relationship satisfaction and be more depressed, while more *Secure* subjects would have higher levels of relationship satisfaction and would be less depressed.
- (3) Attachment dimensions would have some modifying influence on the level of relationship satisfaction at the four months followup, or vice versa.
- (4) Subjects who were more *Secure* in their attachment dimension would write more positive and more interpersonal relationship descriptions; and subjects who were more *Avoidant* and/or more *Anxious/ambivalent* would write more negative and less interpersonal relationship descriptions.
- (5) Factors leading to relationship dissolution would include lower relationship satisfaction; less positive and less interpersonal relationship descriptions; more Ludic, less Erotic, less Agapic lovestyles; and more *Avoidant* and less *Secure* attachment dimensions.
- (6) Subjects who perceived their partners to be similar to themselves on the attachment dimensions would have higher levels of relationship satisfaction.
- (7) More *Secure* subjects would be more Erotic and more Agapic in their lovestyle; more *Anxious/ambivalent* subjects would be more Manic; and more *Avoidant* subjects would be more Ludic.

Method

Subjects

Undergraduates attending the University of Canterbury who were currently in heterosexual dating relationships were recruited. The initial pool of subjects comprised 152 students (105 female and 47 male) in heterosexual, premarital relationships.

Criteria for selection for the study were: (a) length of relationship of at least two months; (b) relationship described as either 'steady dating', 'serious dating', or 'engaged to be married'; and (c) both parties of each couple agreeing to take part. A final sample of fifty-one undergraduates (35 females and 16 males) agreed to participate in the study with their partners. Twenty-four of the partners were also undergraduates (12 females and 12 males). The study and followup took five months which was well within the nine months university calendar.

Procedure and Overview

The initial pool of subjects completed a preliminary Relationship assessment questionnaire during class. This consisted of the Relationship Happiness Scale which was specifically designed for premarital samples (see Measures), plus information concerning the length of time they had been involved in their relationships, the type of relationship (e.g. 'casual dating', 'steady dating', 'serious dating', or 'engaged to be married'), and their sex and age (see Appendix 1). Subjects were offered the chance of winning a lottery (first prize \$80.00, second prize \$40.00, and third prize \$20.00) as an incentive for participation in the study, and interested subjects were asked to place their telephone numbers and names on the scales to enable contact to be made later. Subjects were assured that all their data would be anonymous and confidential, and that they would not see or know of what their partners had written, and vice versa.

The study proper began with a free-response description of their relationship with the partners in separate rooms. They were given thirty minutes to write this. Questionnaires were then administered: Attachment dimension, to be filled in for self and for partner (see Appendix 2); Attachment history (see Appendices 3 & 4); Relationship happiness scale (see Appendix 1); Beck depression inventory (see Appendix 5); Love attitudes scale (see Appendix 6); and a short demographic questionnaire (see Appendix 7). Couples were asked not to discuss the study with other people, and they were reminded of the follow-up which would be by phone in four months time. A thorough debriefing was given to ameliorate any negative consequences, and assurances were reiterated concerning the anonymity and confidentiality of all data. No subject or partner appeared to be unduly disturbed or distressed during or after the study.

For the follow-up, all fifty-one couples were contacted separately four months after they had completed the study. They were initially asked "Are you still in your relationship?" If the answer was "Yes", the following questionnaires were administered: Attachment dimension (for self only) (see Appendix 2), and the Relationship happiness scale (see Appendix 1). Each subject was thanked for their participation in the study. A further debriefing was given if necessary, but no subject or partner appeared to be unduly disturbed or distressed (even if they were no longer in their relationship). They were also encouraged to see the investigator at a later date to discuss the study and the results.

Measures

The attachment and mental model items used here were derived from those initially developed by Hazan and Shaver (1987), and modified by Shaver and Hazan (1988).¹

Attachment Dimensions

This construct consists of three items which correspond to the hypothesized attitudes subjects who are more *Secure*, *Avoidant*, and *Anxious/ambivalent* in their attachment

¹Other questions were asked but not reported.

dimension have in romantic relationships. Hazan and Shaver used forced-choice technique for these items. In the present study six-point Likert scales were used ranging from "strongly disagree" to "strongly agree".

For the present study the items as modified by Shaver and Hazan (1988) were used. The items were the following:

Avoidant: I am somewhat uncomfortable being close to others. I find it difficult to trust them completely, difficult to allow myself to depend on them. I am nervous when anyone gets too close, and often, love partners want me to be more intimate than I feel at all comfortable being.

Anxious/ambivalent: I find that others are reluctant to get as close as I would like. I often worry that my partner doesn't really love me or won't stay with me. I want to get very close to my partner, and this sometimes scares people away.

Secure: I find it relatively easy to get close to others and am comfortable depending on them. I don't often worry about being abandoned or about someone getting too close to me.

On the first page subjects were asked to rate each of the previous three statements on the degree to which "they fit your feelings and experiences in love relationships". On the second page subjects were asked to "Now consider the same statements in terms of how your partner would answer these items" (see Appendix 2). Subjects were verbally instructed to answer the pages in order, and not to refer back to previous answers.

Attachment History

Subjects were questioned concerning the attitudes they perceived their parents to have maintained towards them during their childhood. The words "mother or principal female caregiver", and "father or principal male caregiver" were used. For convenience sake these two categories will henceforth be referred to as "mother" and "father". Hazan and Shaver (1987) found that different adjectives were significant for mother and father, and it is from their list that the following statements were compiled.

There were twelve statements regarding the subject's perception of the "mother's" attitude towards her/him during childhood: (1) She was respectful to me; (2) I thought

she was a confident person; (3) I thought she was a strong person; (4) I thought she was a likable person; (5) I found her to be an intrusive person; (6) I thought she was an accepting person; (7) I found her to be a disinterested person; (8) I respected her; (9) I found her to be a demanding person; (10) I thought she was a responsible person; (11) I thought she was a humorous person; and (12) I found her to be a rejecting person. Six-point Likert scales were used ranging from "strongly disagree" to "strongly agree" (see Appendix 3). A reliability analysis was carried out on these twelve statements which yielded an alpha of .81; thus a new overall variable was created and named "mother".

With regard to the subject's perceived relationship with the "father" there were seven statements, viz.: (1) I found him to be a caring person; (2) I thought he was a humorous person; (3) He was unfair to me; (4) I found him to be a loving person; (5) I thought he was a sympathetic person; (6) He was unresponsive to me; and (7) He was affectionate to me. Six-point Likert scales were used ranging from "strongly disagree" to "strongly agree" (see Appendix 4). A reliability analysis was carried out on these seven statements which yielded an alpha of .87, and another new overall variable was created named "father".

Relationship Happiness Questionnaire

This six-item questionnaire measures perceptions of love, happiness, relationship stability, seriousness of problems, general satisfaction, and level of commitment, and is based on that used by Grigg, Fletcher, and Fitness (in press) (see Appendix 1). It was specifically designed for premarital samples, and Fletcher and Blampied (1989) reported an internal reliability of .87.

Beck Depression Inventory

This eight-item questionnaire is the shortened form of Beck's Depression Inventory (Beck, 1967). This was specifically designed to assess the severity of common depressive symptoms (see Appendix 5).

Love Attitudes Scale

This 42-item scale was developed by Hendrick and Hendrick (1986) to elicit Lee's (1973, 1977, 1988) six Lovestyles. The scale is composed of six 7-item subscales: Eros, Ludus, Storge, Pragma, Mania, and Agape. Hendrick and Hendrick found reliability analyses produced alpha coefficients above .70 for five of the subscales, although Storge attained an alpha level of .62. The present study used six-point Likert scales from "strongly disagree" to "strongly agree" (see Appendix 6).

Demographic Questionnaire

This contained four questions: (a) "How many previous important close relationships have you had?" This had a six-point Scale from "none", to "five-plus". (b) "Have you ever experienced "crushes" before the age of ten?" This was answered on a yes/no basis. The other two questions concerned the subject's age, and the length of time the subject had been involved in the relationship (see Appendix 7).

Free-response Description of Relationship Coding

This began with: "We want you to describe your relationship in your own words. Include whatever you think is important, but make the description as full as you are able to. This information will be strictly confidential and your partner will not see it or know of it, so please feel free to be completely honest and candid." The number of words in each free-response was counted, and the free-responses were divided into units which comprised a sentence or phrase. These were then coded as *positive*, *negative* or *neutral*. The units were then coded into one of the following four categories as used by Fletcher et al. (1987). *Actor descriptions* were items directed at the actor (e.g. I am a happy person). *Partner descriptions* were items directed at the partner (e.g. He can be helpful). *Interpersonal descriptions* included items concerning the relationship itself (e.g. We try to spend time together) or expressing some interaction process (e.g. I am aware of her problems so she confides a lot in me). A description was not necessarily coded as interpersonal because it mentioned both partners. For example, descriptions such as "He gets really cross with me" and "I do not like his friends" were coded as partner or actor

items. *External descriptions* included any item not directed at the actor, the partner, or the relationship (e.g. her mother made demands; his father caused trouble).

This criteria was used by the two independent raters coding the free-responses, and all disagreements were discussed and resolved. Interrater reliability was assessed by the percentage of the number of items coded into each category by each rater prior to discussion and resolution. Agreements for "positive" descriptions were 94%, with 93% for "negative", and 87% for "neutral" descriptions. Agreements for "actor" descriptions were 92%, with 97% for "partner", 95% for "interpersonal", and 96% for "external" descriptions. Hence adequate reliability was obtained.

A percentage was first made of both positive and negative, then negative was subtracted from positive, giving a new overall variable of "positive percentage units". A percentage was then made of actor, partner, and interpersonal, with actor and partner being subtracted from interpersonal, giving a new overall variable of "interpersonal percentage units", which then became negative. The number of words was dropped from analysis.

Results

The results of this study will be presented in three broad categories, viz.: Descriptive analyses, Regression analyses, and Discriminant analysis. Time One represents the original study, and Time Two represents the four-month followup. The Descriptive section will contain the means and correlations among the important variables, such as attachment dimensions, depression, relationship satisfaction, attachment history, free-response description, and lovestyles.

The Regression section will begin with results regarding the unique influence exerted on the attachment dimensions by attachment history, relationship satisfaction, depression and the free-response description of the relationship. Secondly, it will contain results concerned with the impact that relationship satisfaction and the attachment dimensions (at Time One) exert on the same variables measured four months later. Finally, there will be results concerned with the best predictors of relationship dissolution four months after the original study was completed.

Descriptive Analyses

Means and Standard Deviations of all Major Variables

Kenny (1988) states that the person can be used as the unit of analysis rather than the dyad if the data are independent. To test for non-independence across partners, all variables were correlated across partners. The results are shown in Table 1. As can be seen only three of the major variables were non-independent (i.e., relationship satisfaction, age, and Erotic lovestyle). Hence, the variables were considered by and large to be independent at the dyad level. Therefore, it was decided each subject rather than each dyad would be used as the unit of analysis. The means and standard deviations of all the major variables are presented in Table 1. It can be seen that the free-response

Table 1

Correlations Between Partners, and Means and Standard Deviations of Major Variables.

Variable	Mean	sds	Correlation
<u>Attachment dimension - Time One</u>			
Avoidant	2.29	1.32	.02
Anxious/ambivalent	2.34	1.37	-.09
Secure	3.97	1.53	.04
<u>Attachment dimension - Time Two</u>			
Avoidant	1.86	0.90	.01
Anxious/ambivalent	2.17	1.14	.02
Secure	4.71	1.10	.07
<u>Perceived positivity of attachment history</u>			
Mother	4.93	0.69	-.04
Father	4.49	1.10	.06
<u>Lovestyle</u>			
Erotic	4.56	0.71	.40**
Ludic	2.36	0.91	.00
Storgic	4.14	0.73	-.02
Pragmic	2.39	0.90	.03
Manic	3.52	0.91	-.10
Agapic	4.60	0.75	.16
<u>Depression</u>	1.23	0.25	.15

Relationship Satisfaction

Time One	5.09	0.68	.35*
Time Two	5.33	0.74	.55***

Free-response relationship descriptions

Percentage Positive units	58.43	18.17	.24
Percentage Negative units	10.38	10.48	.09
Percentage Actor units	30.06	13.85	.06
Percentage Partner units	21.61	12.77	-.14
Percentage Interpersonal units	45.40	21.53	-.03

Length (of present relationship

<u>in months)</u>	1.01	0.33	.98
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Note. Time One, $n = 102$; and Time Two (4-month followup), $n = 84$. All variables were scored in a positive direction. For ease of readability, composite variables were converted to their mean scores on a six point scale, except for Length of the relationship which was in months, and the Free-response relationship description units which are percentages.

* $p < 0.05$
 ** $p < 0.01$
 *** $p < 0.001$

relationship descriptions comprised mainly positive units and interpersonal units, and that perception of attachment history for both mother and father had high positive means.

Correlations Between Attachment Dimensions

The relevant correlations can be seen in Table 2.² As predicted, subjects who were more *Secure* were less *Avoidant* and less *Anxious/ambivalent*. In addition, those who were more *Avoidant* were also more *Anxious/ambivalent*.

²Sporadic sex differences were found but not reported.

Table 2

Correlations Between Attachment dimensions, Depression, and Relationship Satisfaction.

Variable	1	2	3	4	5
<u>Attachment dimension</u>					
1..Avoidant	--	.27**	-.25***	.31***	-.29**
2..Anxious/ambivalent		--	-.57***	.28**	-.20*
3..Secure			--	-.17	.19*
4. <u>Depression</u>				--	-.17
5. <u>Relationship Satisfaction</u>					--

$N = 102.$

* $p < 0.05$

** $p < 0.01$

*** $p < 0.001$

Correlations of Attachment Dimensions with Depression, and Relationship Satisfaction

These correlations are also shown in Table 2. As expected, subjects who were more *Avoidant* and *Anxious/ambivalent* were more depressed. Subjects who were more *Avoidant* or more *Anxious/ambivalent* were also lower in relationship satisfaction, while the more *Secure* subjects had a higher level of relationship satisfaction.

The Relation Between Perceived Similarity of Attachment Dimensions and Relationship Satisfaction

It was hypothesized that perceived similarity in the attachment types would be related to the level of satisfaction in close relationships. This prediction was by and large confirmed. To investigate this hypothesis, each subject's self-report on the three attachment questions was compared to their perception of their partner's attachment

Table 3

Correlations Between Perceived Similarity of Subject's Attachment Dimension with Partner as a Function of Relationship Satisfaction.

Variable	Relationship Satisfaction	
	High	Low
<u>Female Attachment dimension</u>		
Avoidant	.39*	.17
Anxious/ambivalent	.28	.11
Secure	.51**	-.09
<u>Male Attachment dimension</u>		
Avoidant	.44*	-.13
Anxious/ambivalent	.15	-.29
Secure	.60**	.09

N = 102.

**p* < 0.05

***p* < 0.01

****p* < 0.001

dimension by computing correlations across subjects. For this analysis, females and males were divided into higher and lower relationship satisfaction groups, using median splits on the Relationship Satisfaction Scale. The resultant correlations can be seen in Table 3.

Females who were higher in relationship satisfaction perceived their partners as similar to themselves on both the *Avoidant* and *Secure* attachment dimensions, but not on the *Anxious/ambivalent* dimension. This pattern was repeated for males who were higher in relationship satisfaction, and here again the *Secure* attachment dimension had

the strongest correlation. There were no significant correlations for females or males who were lower in relationship satisfaction.

The above results became more important when other perceived similarity correlations were found to be nonsignificant. There was no similarity between the self-report of a subject and their perception of the attachment dimension of the average person of their own age, nor was perception of the average person's dimension. There was also no similarity between self-reports of attachment dimensions between couples in the dyad (i.e., actual similarity). Thus it would seem that most of the subjects who were higher in relationship satisfaction perceived their partners to be similar on the attachment dimension to themselves, although an analysis of actual similarity across the dyad revealed the inaccuracy of this belief. There were sporadic correlations showing 'Female accuracy' and 'Male accuracy' but no discernible pattern in the attachment dimension for either depression or relationship satisfaction. 'Female accuracy' was the correlation between the female subject's perception of her partner's attachment dimension, and her partner's self-report of himself, with 'Male accuracy' vice versa.

Summary.

It was expected, replicating previous research, that more *Secure* subjects would be less *Avoidant* and less *Anxious/ambivalent*, and that more *Secure* subjects would be higher in relationship satisfaction. It was also hypothesized that subjects who were more *Avoidant* and more *Anxious/ambivalent* would be depressed, and that there would be an inverse relationship between depression and relationship satisfaction. These predictions were by and large confirmed, although there was no correlation between relationship satisfaction and the attachment dimension of *Secure*. Subjects who were higher in relationship satisfaction and also more *Avoidant* or *Secure* in their attachment dimension perceived their partners to be similar to themselves, although this was in fact not correct given that there was no evidence of actual similarity. This pattern was not repeated for the *Anxious/ambivalent* attachment dimension.

Table 4

Correlations of Attachment History and Free-response Relationship Description, with Attachment Dimension, Depression, and Relationship Satisfaction.

Variable	Attachment history		Free-response Relationship Description	
	Mother	Father	%Positive	%Interpersonal
<u>Positivity of Attachment history</u>				
Mother	--	.30**	.03	-.07
Father	.30**	--	.19	.08
<u>Free-response Relationship Description</u>				
Percentage Positive	.03	.19	--	.45***
Percentage Interpersonal	-.07	.08	.45***	--
<u>Attachment dimension</u>				
Avoidant	-.39***	-.16	-.25*	-.24*
Anxious/ambivalent	-.07	-.35***	-.36***	-.13
Secure	.10	.20*	.25*	.07
<u>Depression</u>	-.12	-.24*	-.31**	-.28**
<u>Relationship Satisfaction</u>	.25*	-.00	.47***	.22*

$N = 102.$

* $p < 0.05$

** $p < 0.01$

*** $p < 0.001$

Correlations Between Attachment History and Attachment Dimensions, Depression, and Relationship Satisfaction

It was expected that subjects with more positive memories of their relationships with their parents would be more *Secure*, less *Avoidant*, and less *Anxious/ambivalent*.

These predictions were partly confirmed as can be seen in Table 4. It would appear that our perceptions of attachment history may have a bearing on our lives. Attachment history also obtained some significant relations with depression and relationship satisfaction (see Table 4). Subjects who were depressed had a negative perception of their father's attitude towards them during childhood, while subjects who had positive perceptions of their mother's attitude towards them were higher in relationship satisfaction.

Correlations of Free-Response Relationship Descriptions with Attachment Dimensions, Depression, and Relationship Satisfaction

It was hypothesized that subjects with more *Secure* attachment dimensions would submit more positive and more interpersonal free-response descriptions of their relationships, while those who were more *Avoidant* and more *Anxious/ambivalent* would not. It was also expected that subjects with higher relationship satisfaction would render more positive and more interpersonal free-response descriptions of their relationships. These predictions were by and large confirmed (see Table 4).

Subjects who were more *Avoidant* in their attachment dimension gave more negative and fewer interpersonal free-response descriptions. Those who were more *Anxious/ambivalent* also wrote more negative accounts, while subjects who were more *Secure* in their attachment dimension wrote more positive free-response descriptions of their relationship. Subjects who were more depressed wrote more negative and less interpersonal descriptions, while those who were higher in relationship satisfaction rendered more positive and more interpersonal descriptions of their relationship.

Correlations of Lovestyles with Attachment Dimensions, Depression, and Relationship Satisfaction

It was predicted, replicating previous research, that subjects who were more *Avoidant* in their attachment dimension would be Ludic in lovestyle, those more *Anxious/ambivalent* would be Manic, and those more *Secure* would be either Erotic or Agapic. It was also expected that subjects evincing Erotic and Agapic lovestyles would

Table 5

Correlations of Lovestyles with Attachment Dimension, Depression, and Relationship Satisfaction.

Variable	Erotic	Ludic	Storgic	Pragmic	Manic	Agapic
<u>Attachment dimension</u>						
Avoidant	-.24*	.47***	-.17	.18	.01	-.22*
Anxious/ambivalent	-.24*	.04	-.02	-.10	.31**	-.04
Secure	.13	-.10	.08	.01	-.15	.09
<u>Depression</u>	-.18	.21*	-.02	.03	.22*	-.08
<u>Relationship Satisfaction</u>	.44***	-.50***	.13	.03	.14	.59***

$N = 102.$

* $p < 0.05$

** $p < 0.01$

*** $p < 0.001$

be higher in relationship satisfaction, while those with Ludic and Manic lovestyles would be lower in relationship satisfaction. Moreover, it was expected that subjects who were either Ludic or Manic in their lovestyle would be more depressed, while those who were either Erotic or Agapic would not. These predictions were by and large confirmed as can be seen in Table 5.

Subjects who were more *Avoidant* in their attachment dimension were more Ludic in their lovestyle, and less Erotic or Agapic. Those who were more *Anxious/ambivalent* in their attachment dimension were more Manic in their lovestyle, and less Erotic. Subjects who were more Ludic or more Manic in their lovestyle were more depressed, with those more Ludic being lower in relationship satisfaction as well. Those subjects who were more Erotic or Agapic in their lovestyle were also higher in relationship satisfaction.

Summary.

It would appear that our perceptions of attachment history may have a bearing on our lives. Subjects who were more *Avoidant* in their attachment dimension had negative perceptions of their past relationship with their mother, while those who were more *Anxious/ambivalent* in their dimension had negative perceptions of their relationship with their father. Depressed subjects had unpleasant memories of their father, while subjects who had pleasant memories of their mother were higher in relationship satisfaction. More negative free-response relationship descriptions were written by subjects who were more *Avoidant* or more *Anxious/ambivalent*, while those who were more *Secure* in their attachment dimension wrote positively about their relationship. Depressed subjects wrote more negative and less interpersonal descriptions, while subjects who were higher in relationship satisfaction wrote positive, interpersonal descriptions about their relationship. It appears that the Ludic lovestyle is associated with the more *Avoidant* attachment dimension, Manic with the more *Anxious/ambivalent* dimension, and both Erotic and Agapic with the more *Secure* dimension. Depressed subjects were either Ludic or Manic in lovestyle, while those who were higher in relationship satisfaction had either an Erotic or Agapic lovestyle. In most of these results there was an inverse relationship between depression and relationship satisfaction (i.e. if a variable was negatively related to depression, it was positively associated with relationship satisfaction, and vice versa).

Regression Analyses

Clearly one of the problems of interpreting the correlations presented here is that many of the variables share variance (e. g. relationship satisfaction is significantly correlated with depression). In order to control for the effect of confounding variables a series of regressions were carried out.

Table 6

Standardized Regression Co-efficients from Hierarchical Regressions with Attachment Dimensions as the Dependent Variables.

Independent variables	Dependent variables		
	Avoidant	Anx/ambivalent	Secure
<u>Set One: Distal Variables</u>			
Positivity of Attachment History:			
Mother	-.27**	.11	.02
Father	-.02	-.34***	.18
Relationship Satisfaction	-.25**	-.19	.19
Depression	.23*	.19*	-.10
<u>Set Two: Proximal Variables</u>			
Free-response relationship description:			
Percentage Positive units	-.14	-.22*	.18
Percentage Interpersonal units	-.16	.07	-.06
<u>R</u> ²	.32***	.24***	.11

Note. The dependent variables are all scored in a positive direction. The regression co-efficients for set one variables were obtained with only these two variables entered. Set two co-efficients were obtained with all the independent variables entered. The R² represents the total variance explained with all variables entered. $n = 102$.

* $p < 0.05$
 ** $p < 0.01$
 *** $p < 0.001$

Hierarchical Multiple Regression Analyses with the Attachment Dimensions as the Dependent Variables

To further investigate the relations between the key variables, a hierarchical regression analysis was used in which variables are entered into the analysis in a

predetermined order with each attachment dimension as the dependent variable (see Cohen & Cohen, 1983, for more details). The first set of independent variables comprised the two perceived attachment history variables (i. e. mother and father), and the level of relationship satisfaction and depression. The second set comprised the previous four variables, and the free-response relationship description variables (i. e. positive and interpersonal).

As can be seen in Table 6, subjects who are more *Avoidant* in their attachment dimension, have a negative attachment history with the mother, more depression, and decreased relationship satisfaction. The more *Anxious/ambivalent* have a negative attachment history with the father, more depression, and write a more negative free-response relationship description. The *Secure* attachment dimension attained no significant regression coefficients.

Attachment Dimensions and Relationship Satisfaction at Time Two

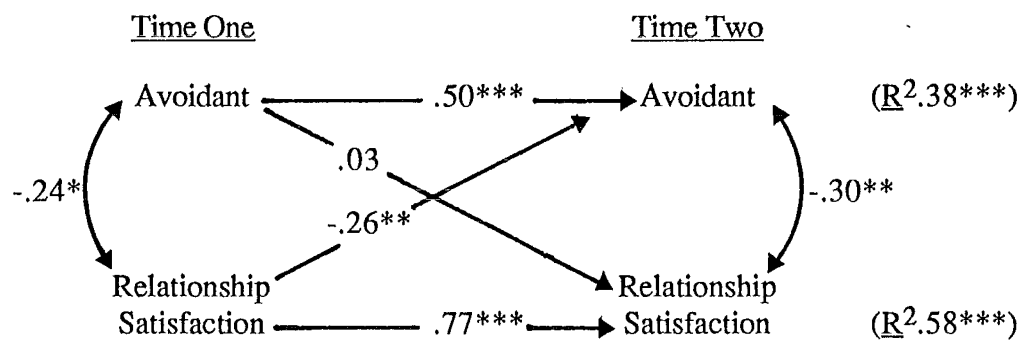
It was proposed to investigate the extent to which the attachment dimensions and relationship satisfaction at Time One would be associated with the attachment dimensions and level of relationship satisfaction at Time Two. Two sets of regression analyses were used for each attachment dimension. In the first regression, the dependent variable was an attachment dimension at Time Two, with the independent variables being the corresponding attachment dimension at Time One, and relationship satisfaction at Time One. In the second regression, relationship satisfaction at Time Two was the dependent variable, and the attachment dimension at Time One and relationship satisfaction at Time One were the independent variables.

As can be seen in Figure 1, the attachment dimensions and relationship satisfaction demonstrated reasonably high stability over time (correlations from .42 to .77). These analyses allow one to determine whether a given variable at Time One is associated with a change in another variable (e. g. level of relationship satisfaction) over the four month period (e. g. level of *Avoidance*). The crucial regression coefficients are those shown

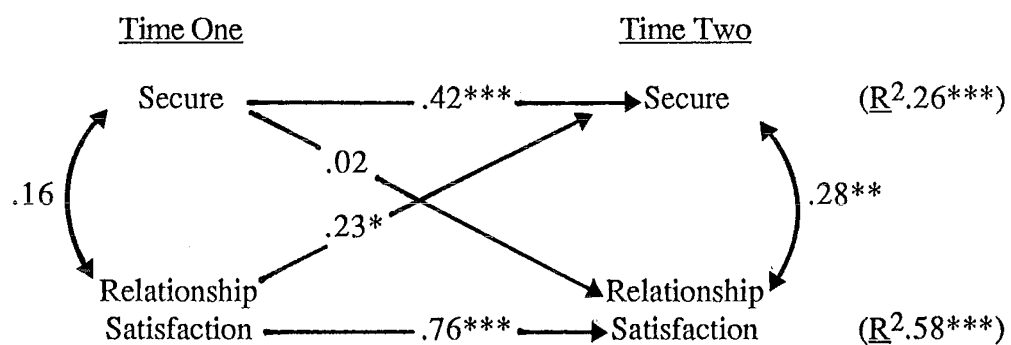
Figure 1

Standardized Regression Co-efficients from Multiple Regression with Attachment Dimensions and Relationship Satisfaction at Time Two as Dependent Variables.

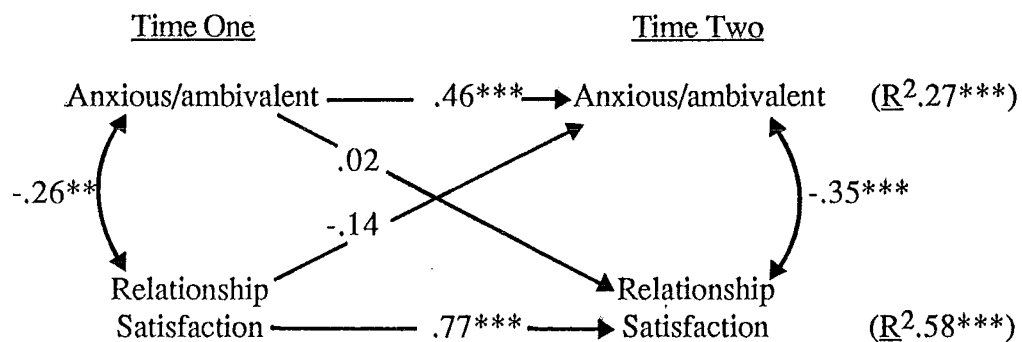
(a)



(b)



(c)



Note. Time One, $n = 102$; and Time Two (4-months followup), $n = 84$. The multiple R^2 for each regression equation are shown in brackets. The single-headed arrows show the regression co-efficients, while the double-headed arrows show the correlations.

* $p < 0.05$
 ** $p < 0.01$
 *** $p < 0.001$

in the diagonal arrows in Figure 1. These show that higher relationship satisfaction (at Time One) is associated with a decrease in *Avoidance* and an increase in *Security* (at Time Two). However, there is no evidence that either *Security* or *Avoidance* at Time One is at all associated with changes in relationship satisfaction over the four months. These results suggest that relationship satisfaction can cause changes in the levels of the attachment dimension, but not vice versa. This finding will be discussed later.

Summary

The correlational results were replicated and extended by the multiple regression analyses in which the effect of confounding variables were ruled out. More *Avoidant* and more *Anxious/ambivalent* subjects, who had negative memories of a parent, were depressed and had low relationship satisfaction levels. Subjects who were more *Anxious/ambivalent* wrote negatively when describing their relationship. Finally, higher relationship satisfaction (at Time One) is associated with a decrease in *Avoidance* and an increase in *Security* (at Time Two). However, there is no evidence that any attachment dimension at Time One is at all associated with changes in relationship satisfaction over the four months.

Discriminant Analyses

It was expected, replicating previous research, that couples who stayed together would be high in relationship satisfaction, and their free-response descriptions would be both more positive and more interpersonal. It was hypothesized that couples who stayed together would be more *Secure* in their attachment dimension and less depressed. To test these predictions a discriminant function analysis was first run using all the major variables from Time One. This was repeated using the best six predictors of relationship

Table 7

Mean Scores of the Variables that Best Predicted Relationship Dissolution After Four Months, According to Discriminant Analysis.

Variable	Relationship Continuing	Relationship Discontinued
Relationship Satisfaction	5.19	4.59***
Length of relationship (in months)	0.96	1.19**
Agapic (lovestyle)	4.67	4.27*
Age (in years)	20.25	18.67*
Erotic (lovestyle)	4.62	4.27
Percentage Positive (free-response description)	50.23	40.06

Note. Time One, $n = 102$; and Time Two (4-months followup), $n = 84$. Higher scores represent higher reported levels for each variable. For ease of readability, composite variables were converted to their mean scores on a six point scale, except for Length of the relationship in months, Age in years, and Positive free-response description which is a percentage. Significant differences between means, according to univariate F -ratios, are shown with asterisks.

* $p < 0.05$

** $p < 0.01$

*** $p < 0.001$

dissolution at the four- months followup, which formed one linearly related set. The mean scores of each of these seven variables for the two groups (separated, or in continuing relationships) can be seen in Table 7. The percentage of "grouped" cases correctly classified was 75.76%. This analysis produced a canonical correlation of .45, ($X^2 21.02$, $p < .001$), with one canonical discriminant function.

These predictions were partly confirmed, but attachment dimensions were in fact not related to relationship dissolution. Key predictors for relationship dissolution were (a) a lower level of relationship satisfaction, (b) a younger subject with a longer length of

relationship, (c) an Erotic or an Agapic lovestyle, and (d) a more negative relationship description.

Discussion

The discussion will be presented in six sections. The first section evaluates the influence of the distal and proximal variables on the three attachment dimensions. The second section reviews the relationship four months later. The third section assesses perceptions of the relationship across couples. The fourth section evaluates the implications of the relations between the two measures of love (attachment dimensions and lovestyles). The hypotheses proffered in the introductory section are discussed in these first four sections. The fifth section is a theoretical and methodological re-appraisal of Hazan and Shaver's (1987) attachment theory of romantic love in the light of the results of this study. The final section draws some inferences, and offers some recommendations for further research.

Influence of Distal and Proximal Variables

The influence of the following distal and proximal variables on the attachment dimensions of romantic love will be appraised: (a) attachment history; (b) relationship satisfaction and depression; and (c) the free-response descriptions of the relationship.

Attachment Dimensions and Attachment History

As expected, and replicating previous research, subjects who were more *Secure* in their attachment dimension were less *Avoidant* and less *Anxious/ambivalent*. In addition, subjects who were more *Avoidant* were also more *Anxious/ambivalent*, a finding not reported by previous researchers, but not an implausible finding given both represent Insecure attachment dimensions.

Subjects with more positive memories of their relationships with their parents were more *Secure*, less *Avoidant*, and less *Anxious/ambivalent*, as expected. Specifically, more *Secure* subjects had positive memories of their father, more *Avoidant* subjects had negative memories of their mother, while more *Anxious/ambivalent* subjects had negative

memories of their father. These findings follow the trends of Hazan and Shaver's (1987) studies.

On the surface these findings support the connection between attachment history and the attachment dimensions, thus reinforcing Hazan and Shaver's (1987) attachment theory of romantic love and Bowlby's (1969) attachment theory. However, the perceived attachment history in this study was obtained at the time of the study, as was Hazan and Shaver's. This attachment history was thus not only "perceived" but it was also retrospective, which throws doubt on interpreting the correlations in terms of a causal association between attachment history and the attachment dimensions.

There are theoretical and methodological objections to obtaining retrospective perceptions of attachment history. First, Sternberg and Beall (in press) argue that retrospective reports of recent events are dubious, because most people have difficulty in remembering happenings of when they were four or five years old. Second, the subjects may have been affected by the "reaction against parental restraint" described by Driscoll, Davis, and Lipetz (1972), as they were young lovers mainly from the late teens to the late twenties writing about their parents. Third, the subjects may have constructed their own implicit theories whereby their relationships now have derived from their relationships in the past, or vice versa (Sternberg & Beall). Finally, a subject's level of relationship satisfaction and of depression could affect his or her perceived retrospective attachment history. A lower level of relationship satisfaction and a higher level of depression has a causal effect on the more *Avoidant* and the more *Anxious/ambivalent* attachment dimensions which were the two attachment dimensions associated with negative memories of a parent. The results in Table 6 control for relationship satisfaction and depression in this study, but Hazan and Shaver (1987) did not examine relationship satisfaction or depression in their studies. It is possible that reaction against parental restraint, and/or any implicit theories, as well as a questionable memory may have coloured the perceived retrospective attachment history of the subject.

Ideally, the only methodologically sound way of obtaining perceived attachment history would be a longitudinal study in which perceived attachment history was gathered during childhood. More practically, perceived attachment history and attachment dimensions data could be gathered some years before research into romantic love at college level. This would still suffer from some of the problems as noted previously, but it would give a test-retest base for the data gathered later during a romantic love close relationship study. Alternately, gathering these data a month or so before the relationship material would obviate some of these problems.

Relationship Satisfaction and Depression

Subjects who were more *Avoidant* and *Anxious/ambivalent* were lower in relationship satisfaction, and more *Secure* subjects were higher in relationship satisfaction, replicating the findings of Levy and Davis (1988) and Hendrick and Hendrick (1989). Hazan and Shaver (1987) also found adult *Secure* subjects were happier, and their *Avoidant* and *Anxious/ambivalent* subjects experienced emotional highs and lows. In this study, subjects who were higher in relationship satisfaction had more positive perceptions of their mother's attitude towards them, while subjects who had a lower level of relationship satisfaction had more negative perceptions of their mother's attitude towards them during childhood.

More depressed subjects were more *Avoidant* and *Anxious/ambivalent*, as predicted. More depressed subjects also had negative retrospective perceptions of their fathers' attitude towards them during childhood. No other studies have linked depression with Hazan and Shaver's (1987) attachment dimensions of romantic love. Previous research with children has linked depression with the two Insecure (*Avoidant* and *Anxious/ambivalent*) attachment dimensions (Joyce, 1984; Radke-Yarrow et al., 1985; Sroufe, 1988). Depression has also been linked in other romantic love theories to love states comparable to the *Anxious/ambivalent* attachment dimension: i.e. addictive love (Peele with Brodsky, 1975); limerent love (Tennov, 1979); and lovesickness (Hindy & Schwarz, 1985).

To sum up, this study has firmly established the link between the two Insecure attachment dimensions (*Avoidant* and *Anxious/ambivalent*), and both relationship satisfaction and depression, as predicted. The link with relationship satisfaction was replicated for more *Secure* subjects, but there was no association with depression. The depression results for attachment dimensions are in the opposite direction to the correlations obtained with relationship satisfaction, as hypothesized.

Free-response Descriptions of Relationship

More *Secure* subjects wrote more positive free-response descriptions of their relationships, while subjects who were more *Avoidant* and more *Anxious/ambivalent* wrote negative descriptions, as predicted. More *Avoidant* subjects wrote less interpersonal descriptions, which was predicted as they fear intimacy, thus avoiding commitment. However, the predictions that more *Anxious/ambivalent* subjects would write less interpersonal descriptions, and that more *Secure* subjects would write more interpersonal descriptions, were not borne out.

Relations Between Distal and Proximal Variables

Correlations were more or less as expected between the three attachment dimensions, distal variables (attachment history, relationship satisfaction, and depression), and proximal variables (positive and interpersonal free-response descriptions of relationship). However, a series of hierarchical regressions, in which variables are entered into the analysis in a predetermined order, with each attachment dimension as the dependent variable, was carried out to control for the effect of confounded variables. These results are important for many of the variables are confounded, rendering interpretations of the zero-order correlations problematic.

These results suggest that, when controlling for the effect of all the remaining distal variables, more *Avoidant* subjects had less positive memories of their relationships with their mother, were less satisfied with their relationships, and were more depressed. *Anxious/ambivalent* subjects, in contrast, had more negative memories of their relations with their father, and were more depressed. None of the regression co-efficients were

significant with the *Secure* attachment dimension as the dependent variable. The importance of both depression and relationship satisfaction in terms of their possible impact on the attachment dimensions is confirmed in these results.

The two Insecure attachment dimensions produced different results in their relations to attachment history. More *Avoidant* subjects reported that their mothers were unlikable and disinterested although intrusive and demanding. Given these memories of their mothers' attitude towards them, it is not surprising that subjects in this attachment dimension avoid commitments, and do not wish to be close to their partners. On the other hand, more *Anxious/ambivalent* subjects reported that their fathers were unfair, uncaring, unloving, and neither sympathetic nor affectionate towards the subjects. With these childhood memories, it is surprising that they do not avoid commitments as more *Avoidant* subjects do: instead, more *Anxious/ambivalent* subjects keep pursuing love in a very close relationship. Although these findings replicated attachment history results of Hazan and Shaver (1987), there should perhaps be further research on this historical aspect. It is not clear why memories of a cold, rejecting mother in childhood should deter both female and male subjects from commitments in adult close relationships, yet memories of an unfair, unloving father in childhood should prompt both female and male adult subjects to forever pursue a very close loving relationship. Freudian themes could possibly offer an "opposite sex" rationale, but not for both female and male subjects to react in the same way.

The Relationship Four Months Later

Two issues are dealt with in this section: Do attachment dimensions predict relationship dissolution in dating couples, and do the attachment dimensions at Time One affect or modify relationship satisfaction at Time Two?

Couples who terminated their relationships differed, as expected, from couples who stayed together for the four months. The university calendar was deemed to have no effect on relationship dissolutions, as the entire study (including the four-months

followup) was conducted from May to September, and the university year was from March to November (covering the four winter months). As expected, and replicating previous research, the level of relationship satisfaction, Agapic and Erotic lovestyles, and positive free-response description of relationship were among the factors predicting relationship dissolution. Younger subjects, who were already in a dating relationship before they commenced university, who had a lower level of relationship satisfaction and were less Agapic and Erotic in their lovestyle, were more likely to end their relationship. Perhaps the novelty and the pressures of university life (particularly if the partner is not an undergraduate as well) are especially influential for this group. Nevertheless, the most important predictor of relationship dissolution was a lower level of relationship satisfaction, as previous research has shown (Fletcher et al., 1987; Hendrick et al., 1988).

Attachment dimensions were not among the significant variables relating to relationship dissolution. This is surprising, given the importance that Hazan and Shaver (1987) have accorded them, and considering that variables from another measure of love (Agapic and Erotic lovestyles) were predictive factors. As attachment dimensions did not feature among the factors correlating with relationship dissolution, doubt is thrown on the predictive qualities of Hazan and Shaver's theory.

It was predicted that attachment dimensions would affect or modify relationship satisfaction over time, in accordance with the theme of Hazan and Shaver's (1987) attachment theory of romantic love and Bowlby's (1969) attachment theory. There was no evidence that any of the attachment dimensions were associated with any change in the level of relationship satisfaction, but relationship satisfaction was associated with a change in the levels of two of the three attachment dimensions at Time Two. A four month period seems a relatively short time for relationship satisfaction to modify the attachment dimensions, given the powerful properties accorded them by Hazan and Shaver and Bowlby (1980). These findings again cast doubt on the predictive qualities of Hazan and Shaver's theory.

Perceptions of Relationship Across Couples

It was hypothesized that similarity between subjects' self-reports and perceptions of the partners' attachment dimensions would be related to higher levels of satisfaction in close relationships. This prediction was confirmed for both the more *Secure* and *Avoidant* dimensions, but not for the more *Anxious/ambivalent* attachment dimension. However, there was no "actual" similarity between the couples in any of the attachment dimensions, regardless of relationship satisfaction levels. These results replicate findings on perceived similarity by Sillars (1985), and Sternberg and Barnes (1985).

Relations Between Attachment Dimensions and Lovestyles

A comparison between Hazan and Shaver's (1987) attachment dimensions of romantic love and Lee's (1973) six lovestyles has implications far beyond the superficial parallels between the two measures. As expected, subjects who were more *Avoidant* in their attachment dimension were Ludic in lovestyle, and those more *Anxious/ambivalent* were Manic in lovestyle. This replicated research by both Levy and Davis (1988), and Hendrick and Hendrick (1989). Contrary to expectations and previous research, the more *Secure* subjects were not associated with either lovestyle in the present study.

Re-appraisal of Hazan and Shaver's Attachment Theory of Romantic Love

Most of the psychological literature concerning romantic love has consisted of descriptive studies which do not encompass the broader view advocated by Kelley (1983). Clark and Reis (1988) summarized Kelley's argument:

".... a full theoretical account of love must include four kinds of information: identification of observable phenomena, notions about current causes of these phenomena, their historical antecedents, and their future consequences." (p. 638).

Hazan and Shaver's (1987) attachment theory of romantic love identifies the observable phenomena, when it describes the behaviour applicable to each of the three attachment dimensions. Their theory puts forward notions about the current causes of these

phenomena. Kelley's "historical antecedents" and "future consequences" are implicit in Hazan and Shaver's theory, and were examined in the present study.

Central to Hazan and Shaver's (1987) attachment theory of romantic love is the concept that people's perception of their parents' attitudes towards them during childhood initiates mental models (or attachment dimensions) which affect desires for, and evaluations of, adult relationships. It should not be surprising that subjects who have negative memories of either parent should be Insecure (*Avoidant* or *Anxious/ambivalent*) in their present relationship. While most people would agree that the perception of their upbringing has an effect on their adult relationships, there are methodological problems in investigating this proposition. As already discussed, Hazan and Shaver's attachment history data, and the attachment history data of the present study, were both perceived and retrospective, and as such are methodologically suspect.

In making judgements of their parental relationships, subjects may have been affected by reaction against parental restraint, and/or implicit theories, as well as a questionable memory. Moreover, it is necessary to control for the levels of relationship satisfaction and depression. The methodology used in Hazan and Shaver's (1987) studies, and in the present study, for gathering perceived retrospective attachment history does not fulfil Kelley's (1983) "historical antecedents" requirement. No causal links can be made between attachment dimensions and perceived attachment history obtained in this way. This does not mean that infant attachment dimensions do not persist into adolescence and early adulthood, but it does mean that any empirical evidence for this proposition is weak.

Moreover, Sternberg and Beall (in press) posit that the attachment theory of romantic love does not take into account the literature dealing with person-situation interactions (see Magnusson & Endler, 1977). Sternberg and Beall doubt that attachment dimensions are stable in adulthood, although they may be a stable individual-difference characteristic in infancy. First, they argue that the salient attachment dimension depends on the role a person is playing, i.e. lover, friend, colleague, offspring. Second, Sternberg and Beall consider that subjects may generalize about all relationships instead of being specific

about their present love relationship during research, probably meaning that Hazan and Shaver's (1987) attachment dimensions scale was not sufficiently specific. The former theoretical objection concerned with salient person-situation attachment dimensions is perhaps peripheral, as Hazan and Shaver's attachment theory is of romantic love and thus purports to measure the attachment dimension pertaining to a romantic love situation. The latter methodological objection could be answered by Hazan and Shaver's (private correspondence) new 12 question attachment scale, which specifies "my partner" in each question.

The new 12 question attachment scale (Hazan & Shaver, personal correspondence) is more methodologically sound than the three question attachment scale used in the present study. The three attachment questions in the present study have at least four statements each, and for this reason subjects (especially in the telephoned followup) found the questions hard to "grade". This methodological fault may have led to somewhat inaccurate self-assignment to attachment dimensions at the time of the study, and at the followup.

Hazan and Shaver's (1987) attachment theory of romantic love posits that the mental models formed during childhood are taken through the life-span, even if modified over time. For Kelley's (1983) "future consequences" criterion to be plausible, a theory should have predictive value. Therefore, one or more attachment dimensions should feature as factors of relationship dissolution for Hazan and Shaver's theory to have a predictive value. It is possible that an insufficient number of subjects ended their relationships in this study for attachment dimensions to be a factor in the dissolution. However, the fact that Agapic and Erotic lovestyles did feature among the dissolution factors is not consistent with this argument.

In addition, a higher level of relationship satisfaction modified two of the three attachment dimensions (*Avoidant* and *Secure*) during the four month period from Time One to Time Two in the present study. However, the attachment dimensions at Time One had no effect on the attachment dimensions at Time Two, or the level of relationship

satisfaction at Time Two. This result is surprising, given the lifespan qualities accorded the attachment dimensions by Hazan and Shaver (1987) and by Bowlby (1980). While these theorists allow that attachment dimensions may be modified, they emphasize that the modification would happen slowly over long periods of time. Attachment dimensions have little predictive value in this study and have been modified by relationship satisfaction over a short period; thus Hazan and Shaver's theory does not fulfil Kelley's (1987) "future consequences" criterion.

Hazan and Shaver's (1987) attachment theory of romantic love is an intriguing one, with the *Secure* and the *Insecure* attachment dimensions drawn from perceived childhood experiences and purporting to encompass the range of romantic love. Of the three attachment dimensions (*Avoidant*, *Anxious/ambivalent*, and *Secure*), the *Secure* dimension appears to be the most "comfortable". However, the *Secure* attachment dimension appears to lack some essential component of adult love, as it had little predictive value in this study.

Hatfield and Walster (1978) posit there are two types of love, passionate and companionate. They define passionate love as a state of profound physiological arousal where there is an intense longing for union with another, which if reciprocated is associated with fulfilment, and if not with emptiness. Their definition of companionate love is simply the affection felt for those with whom "our lives are deeply entwined". Hatfield (1988) states that passionate love brings ecstasy and misery and is fueled by good and bad passionate experiences, while companionate love gives pleasure and real-life experiences which are fueled by positive experiences but dampened by negative experiences. Nevertheless, Hatfield asserts that the goal of most people is to integrate the "delights" of passionate love with the "security" of companionate love in their close relationships, although this is difficult to attain.

Berscheid's (1988) short answer to "What is love?" is:

"It's about 90 percent sexual desire as yet not sated." (p.373).

Berscheid admits that this still a "very complex and inadequate answer", but asserts that any discussion of love must mention the major part that sexual arousal and desire plays. Berscheid draws from C.S. Lewis (1960) in quoting four species of love: Agape (altruism), affection (attachment), Philias (friendship), and Eros (romantic love). In my opinion, love in a happy marriage does, in fact, encompass all four species of love in differing degrees at different times, and so does love in a happy dating relationship. Altruism and eroticism are captured in Lee's (1973) Agapic and Erotic lovestyles, which were not associated with the *Secure* attachment dimension in this study. Moreover, Agapic and Erotic lovestyles were among the predictive factors for relationship dissolution in this study, but the attachment dimensions of romantic love were not.

However, Shaver et al. (1988) assert:

"Love is a complex dynamic system involving cognitions, emotions, and behaviours. It is not a unidimensional phenomenon, not an attitude, not a simple state of labelled physiological arousal. Adult love should be more not less complicated than infant caregiver attachment, involving as it does a much more differentiated understanding of self, others, and both real and ideal relationships, a much longer history of relationship experiences, more mature feelings of empathy, and adult sexuality." (p. 93).

It would appear from this theoretical description that "normal adult love" as portrayed in the *Secure* attachment dimension encompasses the four components contained in Lewis' (1960) species of love. Actually, the *Secure* dimension statement in Shaver and Hazan's (1988) attachment scale as used is:

"I find it relatively easy to get close to others and am comfortable depending on them. I don't often worry about being abandoned or about someone getting too close to me."

This could describe a relationship with a peer, a colleague, or even a family member, but does not specify a loving close relationship. Hazan and Shaver's (private correspondence) new 12 question scale merely separates these four statements, and includes "my partner" in each of them. Their *Secure* attachment dimension scale does not as yet appear to encompass caregiving, or sexuality, or even be more complicated than

childhood attachment. Perhaps the problem is that their attachment scales poorly represent love, even in their own terms?

Conclusion

This study goes beyond the other research on Hazan and Shaver's (1987) attachment theory of romantic love in three main ways: (a) studying variables longitudinally; (b) studying the relevance of depression to attachment dimensions (and to lovestyles); (c) studying the effect of attachment dimensions on the free-response descriptions of the relationships; and (d) studying perception of relationship across couples in relation to levels of relationship satisfaction. In addition, perceived attachment history was related to the attachment dimensions, which was not possible in Hazan and Shaver's original studies.

Most of the hypotheses based on previous research were confirmed, while new hypotheses concerning the role of depression in attachment dimensions and lovestyles, and perceived similarity between couples, were also confirmed. The longitudinal study was invaluable for revealing that attachment dimensions have no effect on relationship satisfaction over time, but are in fact themselves modified by relationship satisfaction over a four ^{month} period. It also revealed that attachment dimensions are not related to relationship dissolution, so have little predictive value in this study. Other variables, such as levels of relationship satisfaction and depression, had an impact in this study as well as attachment dimensions. Further longitudinal research on dating couples should include relationship satisfaction, and it would be advised to also include depression.

Hazan and Shaver's (1987) attachment theory of romantic love has historical antecedents in the attachment history of subjects, but empirical evidence for this proposition is weak. The theory also has future consequences, but there is no empirical evidence for this proposition - indeed there is evidence against it in this study. It could be that the attachment measures devised do not as yet capture the components of love as proposed by these attachment theorists.

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Appendix 1

The following questionnaire is part of a larger study looking at different aspects of close relationships. If you are currently involved in a dating relationship, your co-operation in completing this questionnaire would be greatly appreciated.

Please circle the correct answer:

SEX; MALE FEMALE

Please indicate your age:

_____ years

Please put a circle around your relationship status:

Casual dating

Steady dating

Serious dating

Engaged to be married

Please indicate the length of time you have been involved in this relationship:

_____ years _____ months _____ weeks

Thank you for your help!

Please answer the following questions about your relationship by circling ONE number from the scale beneath each statement.

1=Not at all 2=Very little 3=Not very much 4=Quite a lot 5=Very much 6=Extremely

A) How much do you love your partner?

Not at all 1 2 3 4 5 6 Extremely

B) How happy are you in your relationship?

Not at all 1 2 3 4 5 6 Extremely

C) In general, how often do you think that things between you and your partner are going well?

Not at all 1 2 3 4 5 6 Extremely

D) How serious are the problems in your relationship?

Not at all 1 2 3 4 5 6 Extremely

E) Overall, how satisfied are you with your relationship?

Not at all 1 2 3 4 5 6 Extremely

F) Which of the following statements best describes how you feel about the future of your relationship? Please mark the statement with a tick.

1) I want desperately for my relationship to succeed and would go to almost any lengths to see that it does

2) I want very much for my relationship to succeed and would try very hard to see that it does

3) I am very keen for my relationship to succeed and will do my fair share to see that it does

4) It would be nice if my relationship succeeded, but I cannot do any more than I am doing now to make it succeed,

5) It would be nice if my relationship succeeded, but I refuse to do any more than I am doing now to keep it going,

6) My relationship is unlikely to succeed, and there is no more I can do to keep it going,

7) My relationship can never succeed and I do not wish to keep it going.

Within the next month I will be running a further study involving personal relationships. You would be asked no embarrassing questions concerning your relationship, and it would be completely anonymous and confidential. There is also no deception involved in this experiment. If you think you would be interested in taking part and would like to know more about what is involved please write your name and phone number below.

In addition, every participant has a chance of winning a lottery prize for taking part (and free coffee and biscuits):

1st prize: \$80.00, 2nd prize: \$40.00, 3rd prize: \$20.00.

If you write your name below this does not commit you in any way to taking part. I will be randomly selecting a certain number of people to take part in the study. If you are chosen you will be contacted, the full details of the study will be described, and you can make a firm decision at that point.

NAME:

CONTACT PHONE NUMBER:

Appendix 2

Please rate each of the following three statements on the degree to which they fit your feelings and experiences in love relationships. Please circle ONE number from the scale beneath each statement.

1=Strongly Disagree *2=Moderately Disagree* *3=Slightly Disagree* *4=Slightly Agree* *5=Moderately Agree* *6=Strongly Agree*

1. I am somewhat uncomfortable being close to others. I find it difficult to trust them completely, difficult to allow myself to depend on them. I am nervous when anyone gets too close, and often, love partners want me to be more intimate than I feel at all comfortable being.

Strongly Disagree 1 2 3 4 5 6 *Strongly Agree*

2. I find that others are reluctant to get as close as I would like. I often worry that my partner doesn't really love me or won't stay with me. I want to get very close to my partner, and this sometimes scares people away.

Strongly Disagree 1 2 3 4 5 6 *Strongly Agree*

3. I find it relatively easy to get close to others and am comfortable depending on them. I don't often worry about being abandoned or about someone getting too close to me.

Strongly Disagree 1 2 3 4 5 6 *Strongly Agree*

Now consider the same statements in terms of how your partner would answer these items. Please circle ONE number from the scale under the statement to represent the answer you think your partner would give to the same items.

1=Strongly Disagree 2=Moderately Disagree 3=Slightly Disagree 4=Slightly Agree 5=Moderately Agree 6=Strongly Agree

1. I am somewhat uncomfortable being close to others. I find it difficult to trust them completely, difficult to allow myself to depend on them. I am nervous when anyone gets too close, and often, love partners want me to be more intimate than I feel at all comfortable being.

Strongly Disagree 1 2 3 4 5 6 Strongly Agree

2. I find that others are reluctant to get as close as I would like. I often worry that my partner doesn't really love me or won't stay with me. I want to get very close to my partner, and this sometimes scares people away.

Strongly Disagree 1 2 3 4 5 6 Strongly Agree

3. I find it relatively easy to get close to others and am comfortable depending on them. I don't often worry about being abandoned or about someone getting too close to me.

Strongly Disagree 1 2 3 4 5 6 Strongly Agree

Appendix 3

Take a moment to think about your relationship with your MOTHER (or principal caregiver) while you were growing up. What were her attitudes, feelings, and behaviour toward you like? What sort of person was she? Please circle ONE number from the scale beneath each statement.

1=Strongly Disagree 2=Moderately Disagree 3=Slightly Disagree 4=Slightly Agree 5=Moderately Agree 6=Strongly Agree

1. She was respectful to me.

Strongly Disagree 1 2 3 4 5 6 Strongly Agree

2. I thought she was a confident person.

Strongly Disagree 1 2 3 4 5 6 Strongly Agree

3. I thought she was a strong person.

Strongly Disagree 1 2 3 4 5 6 Strongly Agree

4. I thought she was a likable person.

Strongly Disagree 1 2 3 4 5 6 Strongly Agree

5. I found her to be an intrusive person.

Strongly Disagree 1 2 3 4 5 6 Strongly Agree

6. I thought she was an accepting person.

Strongly Disagree 1 2 3 4 5 6 Strongly Agree

7. I found her to be a disinterested person.

Strongly Disagree 1 2 3 4 5 6 Strongly Agree

8. I respected her.

Strongly Disagree 1 2 3 4 5 6 Strongly Agree

9. I found her a demanding person.

Strongly Disagree 1 2 3 4 5 6 Strongly Agree

10. I thought she was a responsible person.

Strongly Disagree 1 2 3 4 5 6 Strongly Agree

11. I thought she was a humorous person.

Strongly Disagree 1 2 3 4 5 6 *Strongly Agree*

12. I found her to be a rejecting person.

Strongly Disagree 1 2 3 4 5 6 *Strongly Agree*

Appendix 4

Take a moment to think about your relationship with your FATHER (or principal male caregiver) while you were growing up. What were his attitudes, feelings, and behaviour toward you like? What sort of person was he? Please circle ONE number from the scale beneath each statement.

1=Strongly Disagree 2=Moderately Disagree 3=Slightly Disagree 4=Slightly Agree 5=Moderately Agree 6=Strongly Agree

1. I found him to be a caring person.

Strongly Disagree 1 2 3 4 5 6 Strongly Agree

2. I thought he was a humorous person.

Strongly Disagree 1 2 3 4 5 6 Strongly Agree

3. He was unfair to me.

Strongly Disagree 1 2 3 4 5 6 Strongly Agree

4. I found him to be a loving person.

Strongly Disagree 1 2 3 4 5 6 Strongly Agree

5. I thought he was a sympathetic person.

Strongly Disagree 1 2 3 4 5 6 Strongly Agree

6. He was unresponsive to me.

Strongly Disagree 1 2 3 4 5 6 Strongly Agree

7. He was affectionate to me.

Strongly Disagree 1 2 3 4 5 6 Strongly Agree

Appendix 5

The following statements have been divided into eight groups. Please put a circle around the statement that best describes how YOU are feeling right now, today.

GROUP 1:

- 1) I do not feel blue or sad
- 2) I feel blue or sad
- 3) I feel blue or sad all the time and I can't snap out of it
- 4) I am so sad or unhappy that it is quite painful
- 5) I am so sad or unhappy that I can't stand it.

GROUP 2:

- 1) I have not lost interest in other people
- 2) I am less interested in other people now than I used to be
- 3) I have lost of my interest in other people and have little feeling for them
- 4) I have lost all my interest in other people and don't care about them at all

GROUP 3:

- 1) I am not particularly pessimistic or discouraged about the future
- 2) I feel discouraged about the future
- 3) I feel I have nothing to look forward to
- 4) I feel that I won't ever get over my troubles
- 5) I feel that the future is hopeless and that things cannot improve.

GROUP 4:

- 1) I do not feel like a failure
- 2) I feel I have failed more than the average person
- 3) I feel I have accomplished very little that is worthwhile
- 4) I feel I am a complete failure as a person.

Please put a circle around the statement that best describes how YOU are feeling right now, today.

GROUP 5:

- 1) I can work about as well as before
- 2) It takes extra effort to get started at doing something
- 3) I don't work as well as I used to
- 4) I have to push myself very hard to do anything
- 5) I can't do any work at all.

GROUP 6:

- 1) I don't have any thoughts of harming myself
- 2) I have thoughts of harming myself but I would not carry them out
- 3) I feel I would be better off dead
- 4) I feel my family would be better off if I were dead
- 5) I have definite plans about committing suicide
- 6) I would kill myself if I could.

GROUP 7:

- 1) My appetite is no worse than usual
- 2) My appetite is not as good as it used to be
- 3) My appetite is much worse now
- 4) I have no appetite at all anymore.

GROUP 8:

- 1) I can sleep as well as usual
- 2) I wake up more tired in the morning than I used to
- 3) I wake up 1 - 2 hours earlier than usual and find it hard to get back to sleep
- 4) I wake up early every morning and can't get more than 5 hours sleep.

Appendix 6

Some of the following items refer to a specific relationship, while others refer to general attitudes and beliefs about love. Whenever possible, answer the questions with your current partner in mind. Please answer each by circling ONE number from the scale beneath each statement.

1=Strongly Disagree 2=Moderately Disagree 3=Slightly Disagree 4=Slightly Agree 5=Moderately Agree 6=Strongly Agree

1. My lover and I were attracted to each other immediately after we first met.

Strongly Disagree 1 2 3 4 5 6 Strongly Agree

2. I try to keep my lover a little uncertain about my commitment to him/her.

Strongly Disagree 1 2 3 4 5 6 Strongly Agree

3. It is hard to say exactly when my lover and I fell in love.

Strongly Disagree 1 2 3 4 5 6 Strongly Agree

4. I consider what a person is going to become in life before I commit myself to him/her.

Strongly Disagree 1 2 3 4 5 6 Strongly Agree

5. When things aren't right with my lover and me, my stomach gets upset.

Strongly Disagree 1 2 3 4 5 6 Strongly Agree

6. I try to use my own strength to help my lover through difficult times

Strongly Disagree 1 2 3 4 5 6 Strongly Agree

7. When my love affairs break up, I get so depressed that I have even thought of suicide.

Strongly Disagree 1 2 3 4 5 6 Strongly Agree

8. I try to plan my life carefully before choosing a lover.

Strongly Disagree 1 2 3 4 5 6 Strongly Agree

9. I cannot love unless I first had caring for awhile.

Strongly Disagree 1 2 3 4 5 6 Strongly Agree

10. I believe that what my lover doesn't know about me won't hurt him/her.

Strongly Disagree 1 2 3 4 5 6 Strongly Agree

1=Strongly Disagree 2=Moderately Disagree 3=Slightly Disagree 4=Slightly Agree 5=Moderately Agree 6=Strongly Agree

11. My lover and I have the right physical "chemistry" between us.

Strongly Disagree 1 2 3 4 5 6 Strongly Agree

12. I have sometimes had to keep two of my lovers from finding out about each other.

Strongly Disagree 1 2 3 4 5 6 Strongly Agree

13. I still have good friendships with almost everyone with whom I have ever been involved in a love relationships.

Strongly Disagree 1 2 3 4 5 6 Strongly Agree

14. It is best to love someone with a similar background.

Strongly Disagree 1 2 3 4 5 6 Strongly Agree

15. Sometimes I get so excited about being in love that I can't sleep.

Strongly Disagree 1 2 3 4 5 6 Strongly Agree

16. I would rather suffer myself than let my lover suffer.

Strongly Disagree 1 2 3 4 5 6 Strongly Agree

17. Our lovemaking is very intense and satisfying.

Strongly Disagree 1 2 3 4 5 6 Strongly Agree

18. I cannot be happy unless I place my lover's happiness before my own.

Strongly Disagree 1 2 3 4 5 6 Strongly Agree

19. When my lover doesn't pay attention to me, I feel sick all over.

Strongly Disagree 1 2 3 4 5 6 Strongly Agree

20. A main consideration in choosing a lover is how he/she reflects on my family.

Strongly Disagree 1 2 3 4 5 6 Strongly Agree

21. The best kind of love grows out of a long friendship.

Strongly Disagree 1 2 3 4 5 6 Strongly Agree

1=*Strongly Disagree* 2=*Moderately Disagree* 3=*Slightly Disagree* 4=*Slightly Agree* 5=*Moderately Agree* 6=*Strongly Agree*

22. I can get over love affairs pretty easily and quickly.

Strongly Disagree 1 2 3 4 5 6 *Strongly Agree*

23. I feel that my lover and I were meant for each other.

Strongly Disagree 1 2 3 4 5 6 *Strongly Agree*

24. I am usually willing to sacrifice my own wishes to let my lover achieve his/hers.

Strongly Disagree 1 2 3 4 5 6 *Strongly Agree*

25. My lover would get upset if he/she knew of some of the things I've done with other people.

Strongly Disagree 1 2 3 4 5 6 *Strongly Agree*

26. I did not realize that I was in love until I actually had been for some time.

Strongly Disagree 1 2 3 4 5 6 *Strongly Agree*

27. An important factor in choosing a partner is whether or not he/she will be a good parent.

Strongly Disagree 1 2 3 4 5 6 *Strongly Agree*

28. When I am in love, I have trouble concentrating on anything else.

Strongly Disagree 1 2 3 4 5 6 *Strongly Agree*

29. Whatever I own is my lover's to use as he/she chooses.

Strongly Disagree 1 2 3 4 5 6 *Strongly Agree*

30. My lover and I became physically involved very quickly.

Strongly Disagree 1 2 3 4 5 6 *Strongly Agree*

31. My lover and I really understand each other.

Strongly Disagree 1 2 3 4 5 6 *Strongly Agree*

32. When my lover gets too dependent on me, I want to back off a little.

Strongly Disagree 1 2 3 4 5 6 *Strongly Agree*

1=Strongly Disagree 2=Moderately Disagree 3=Slightly Disagree 4=Slightly Agree 5=Moderately Agree 6=Strongly Agree

33. Love is really a deep friendship, not a mysterious, mystical emotion.

Strongly Disagree 1 2 3 4 5 6 Strongly Agree

34. One consideration in choosing a partner is how he/she will reflect on my career.

Strongly Disagree 1 2 3 4 5 6 Strongly Agree

35. I cannot relax if I suspect that my lover is with someone else.

Strongly Disagree 1 2 3 4 5 6 Strongly Agree

36. When my lover gets angry with me, I still love him/her fully and unconditionally

Strongly Disagree 1 2 3 4 5 6 Strongly Agree

37. My lover fits my ideal standards of physical beauty/handsomeness.

Strongly Disagree 1 2 3 4 5 6 Strongly Agree

38. I would endure all things for the sake of my lover.

Strongly Disagree 1 2 3 4 5 6 Strongly Agree

39. If my lover ignores me for a while, I sometimes do stupid things to get his/her attention back.

Strongly Disagree 1 2 3 4 5 6 Strongly Agree

40. Before getting very involved with anyone, I try to figure out how compatible his/her hereditary background is with mine in case we ever have children.

Strongly Disagree 1 2 3 4 5 6 Strongly Agree

41. My most satisfying love relationships have developed from good friendships.

Strongly Disagree 1 2 3 4 5 6 Strongly Agree

42. I enjoy playing the "game of love" with a number of different partners.

Strongly Disagree 1 2 3 4 5 6 Strongly Agree

Appendix 7

How many previous important close relationships have you had?

0 1 2 3 4 5+

Have you ever experienced "crushes" before the age of ten? _____

How old are you now? _____

Please indicate the length of time you have been involved in this relationship.

_____ years _____ months _____ weeks